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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,593	10/31/2000	Cary A. Coutant	I0001275-1	1046
22879	7590	11/22/2004	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			KENDALL, CHUCK O	
			ART UNIT	PAPER NUMBER
			2122	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/702,593

**Applicant(s)**

COUTANT ET AL.

**Examiner**

Chuck Kendall

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) \*
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to the application filed 1/27/04.
2. Claims 1 – 16 have been examined.

### ***Response to Arguments***

3. Examiner has considered Applicant's arguments as indicated in Appeal Brief, filed 07/19/2004 with respect to claims 1 – 16, and are persuasive to overcome the previous rejection. The Final rejection of 04/01/2004 has been withdrawn. However Applicant's disclosure is still being rejected. Following is the new grounds of rejection.

### **Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 – 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Davidson et al. USPN 5,613,117 (hereinafter Davidson).

Regarding claims 1 & 16, Davidson anticipates a computer-implemented method, and a computer program for switching between multiple implementations of a routine in a library of routines that are linked with an application program that is hosted by a computer system (5: 55 – 60), comprising:

compiling a plurality of implementations of a routine into respective object code modules, the routine having an associated name and each implementation adapted to a selected hardware configuration (for plurality of implementations see 5: 45 – 50 & 6: 22 – 40, and 6: 57 – 67, shows (adapting) customizing));

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associating the object code modules with the name of the routine and respective sets of hardware characteristics (9:8 – 15); and

resolving when the application program is loaded into memory of the computer system, a reference to the routine using the sets of hardware characteristics and a hardware configuration of the system (27:23 – 32, see RISC, CISC and little endian bit ordering regarding hardware characteristics and configuration).

Regarding claim 2, the method of claim 1, further comprising establishing a symbol table having a plurality of entries, each entry including a name of a routine and a reference to an object code module in the library (28:65 – 67, see variable and label for symbolic table 30).

Regarding claim 3, the method of claim 2, further comprising, for the routine having a plurality of implementations, adding a plurality of entries to the symbol table and associating respective sets of hardware characteristics with the plurality of entries (28:55 – 67, see variable and label for symbolic table 30, for hardware characteristics, see 27: 23 - 33).

Regarding claim 4, the method of claim 3, wherein the hardware characteristics include at least one of clock speed of the processor, processor model, cache configuration of the system, hardware operation latency times, instruction set characteristics, bypass characteristics, branch prediction behavior, pre-fetching capability, information describing stall conditions, branch penalties, size and associativity of processor data structures, queue sizes for out-of-order or decoupled processors, and the number of processors in a multiprocessor system (27: 23 – 33, see 32 bit RISC machine, also see CISC).

Regarding claim 5, the method of claim 4, wherein the resolving step further comprises obtaining the hardware configuration of the system from at least one of a system configuration data file, one or more system identification registers, and system firmware (6: 43 – 47).

Regarding claim 6, the method of claim 3, wherein the resolving step further comprises obtaining the hardware configuration of the system from at least one of a

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system configuration data file, one or more system identification registers, and system firmware (6: 43 – 48, see register set).

Regarding claim 7, the method of claim 1, wherein the hardware characteristics include at least one of clock speed of the processor, processor model, cache configuration of the system, hardware operation latency times, and instruction set characteristics (6:47, see specific instruction set).

Regarding claim 8, the method of claim 1, wherein the resolving step further comprises obtaining the hardware configuration of the system from at least one of a system configuration data file, one or more system identification registers, and system firmware (6: 43 – 48, see register set).

Regarding claim 9, a computer-implemented method for switching between multiple implementations of a routine in a library of routines that are linked with an application program hosted by a computer system, comprising:

- establishing a set of hardware configuration characteristics that describe the computer system (6: 43 – 48, see register set);

- establishing a symbol table, the symbol table having one or more entries that include a name of a routine, a set of hardware characteristics, and an address referencing a routine in the library (9: 8 – 15);

- obtaining a name of a routine having multiple implementations when the library is loaded with the application program into memory of the computer system (28:65 – 67, see variable and label for symbolic table 30);

- matching the name of the routine and the set of hardware configuration characteristics that describe the computer system to an entry in the symbol table (9:20 – 30); and

- generating an address in executable code for references to the routine having multiple implementations when the library is loaded with the application program, the address referencing an implementation in the library as identified in the matching step by the entry in the symbol table(6:47 –50, see specific addressing).

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Regarding claim 10, the method of claim 9, wherein the hardware configuration characteristics include at least one of clock speed of the processor, processor model, cache configuration of the system, hardware operation latency times, and instruction set Characteristics (27: 23 – 33, see 32 bit RISC machine, also see CISC)

Regarding claim 11, the method of claim 10, wherein the resolving step further comprises obtaining the hardware configuration of the system from at least one of a system configuration data file, one or more system identification registers, and system firmware (6: 43 – 48, see register set).

Regarding claim 12, the method of claim 9, wherein the resolving step further comprises obtaining the hardware configuration of the system from at least one of a system configuration data file, one or more system identification registers, and system firmware (6: 43 – 48, see register set).

Regarding claim 13, which discloses the apparatus version of claim 1, see reasoning as previously discussed above.

Regarding claim 14, Davidson anticipates a computer-implemented symbol table for referencing a library of object code modules that implement a plurality of routines, comprising:

a first set of one or more entries, each entry in the first set including a unique name of a routine and a reference to an object code module in the library(28:55 – 67, see variable and label for symbolic table 30, for hardware characteristics, see 27: 23 – 33); and

a second set of one or more entries, each entry in the second set including a shared name of a routine, a set of hardware characteristics, and a reference to an object code module in the library (29: 1 – 5, see literal table).

Regarding claim 15, the symbol table of claim 14, wherein the hardware characteristics include at least one of clock speed of the processor, processor model, cache configuration of the system, hardware operation latency times, instruction set characteristics, bypass characteristics, branch prediction behavior, pre-fetching capability, information describing stall conditions, branch penalties, size and associativity of processor data structures, queue sizes for out-of-order or decoupled

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processors, and the number of processors in a multiprocessor system (27: 23 – 33, see 32 bit RISC machine, also see CISC).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-2723698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-2723695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**WEI Y. ZHEN**  
**PRIMARY EXAMINER**

CK